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October 25, 2017

The Honorable Pat Connell, Chairman  
Water Policy Interim Committee  
Montana Legislature  
P.O. Box 201706  
Helena, MT 59620-1706

Dear Senator Connell:

Thank you for your recent letter concerning the threat of aquatic invasive species in the Columbia River Basin.

The Council recognized several years ago that these species posed a grave threat to the Northwest states, and we have taken steps to both raise public awareness and to help prevent an infestation.

One of our earliest tasks was to request the Independent Economic Analysis Board to study the issue and estimate the total costs to the region from an infestation. The result was the IEAB's 2010 report, *Economic Risk of Zebra and Quagga Mussels in the Columbia River Basin*, [https://www.nwcouncil.org/media/30565/ieab2010\\_1.pdf](https://www.nwcouncil.org/media/30565/ieab2010_1.pdf), which concluded that annual costs to the Northwest would be in the tens to hundreds of millions of dollars.

In 2014, during our process to amend the *Columbia River Basin Fish and Wildlife Program*, we included provisions that promoted monitoring, early detection, rapid response, and public education as important ways to combat the introduction and spread of aquatic invasive species in the region.

We also have worked with members of the Northwest congressional delegation to authorize and fund federal agency activities that would assist and complement the ongoing efforts in the four states.

At the Council's request, Northwest senators included provisions in annual Energy and Water Development Appropriations bills (which fund the operations of the U.S. Army Corps of Engineers, Bureau of Reclamation, and Bonneville Power Administration) urging agencies to prepare threat assessments at their federal water projects. This was to help ensure that the agencies would be better prepared to act rapidly in the event of an infestation.

We also worked with the Pacific Northwest Economic Region and the Pacific States Marine Fisheries Commission to add new provisions in federal law that authorized the U.S. Army Corps of Engineers to work with the four Northwest states to locate and fund watercraft inspection stations at critical points around the region. Prior to this much needed authority, the states shouldered the entire burden of protecting their resources and assets, as well as the federal government's massive investments, from watercraft returning to the Northwest from infested waters in the eastern United States and the Southwest. That has now changed.

We were, of course, very concerned to learn that invasive mussel larvae was detected last year in the Tiber and Canyon Ferry reservoirs. The close proximity to the Columbia Basin is alarming, and we stand ready to work with Montana, the other Northwest states, and others in the region to prevent a natural disaster in the Columbia River Basin. The Council also will have the opportunity to revisit the aquatic invasive species provisions in the *Columbia River Basin Fish and Wildlife Program* when we amend it again in 2019.

Thank you for contacting the Council.

Sincerely,

A handwritten signature in black ink, appearing to read 'H. Lorenzen', with a stylized flourish at the end.

Henry Lorenzen  
Chair

### 3. Non-native and invasive species

#### **Sub-strategy**

Prevent the introduction of non-native and invasive species in the Columbia River Basin, and suppress or eradicate non-native and invasive species.

#### **Rationale**

Non-native and invasive species imperil native species in the Pacific Northwest's ecosystems through predation, competition for food, interbreeding, disease transmission, food web disruption, and physical habitat alteration. The Council acknowledges invasive and non-native species pose direct threats to the program's fish and wildlife restoration efforts through competition, predation and habitat modification. In addition, aquatic non-native species can invade and significantly threaten infrastructure at hydroelectric dams and fish passage facilities in the Columbia River Basin. Currently, the greatest known threat in the Columbia River Basin from aquatic invasive species is introduction into the basin of zebra or quagga mussels. Other aquatic threats include hydrilla, silver carp, flowering rush, and Eurasian milfoil. Terrestrial invasive species that compromise fish habitat and wildlife mitigation projects include such species as rush skeletonweed, yellow starthistle, poison hemlock, and Japanese knotweed, among others. Once established in other locales, management actions have shown little success in removing or controlling these invasive non-native species.

#### **Principles**

- ▶ Regional prevention and management efforts for non-native and invasive species should aim to: (1) detect the presence of these species early and respond rapidly, (2) educate the public; and (3) prevent, monitor, control, and stop or minimize the spread of non-native and invasive species where these pose both a direct threat to the hydropower system, to native fish, or to wildlife species.
- ▶ Incorporate the most up-to-date environmental risk assessment methodology for non-native and invasive species into on-the-ground fish and wildlife projects, particularly in locations where management of non-native fish and invasive fish species overlaps with native fish conservation efforts and management of ESA-listed species.
- ▶ When an introduction of a non-native species is necessary for mitigation, the introduction should be done with a clear understanding of the threats to native species in the Pacific Northwest's ecosystems through predation, competition for food, interbreeding, disease transmission, food web disruption, and physical habitat alteration.

#### **General measures**

##### **▶ Evaluate potential adverse impacts**

- ▷ The Council, in coordination with the federal action agencies, other federal, state and tribal entities, and regional organizations such as the 100<sup>th</sup> Meridian Initiative-Columbia Basin Team (hereafter referred to as the Council and federal and other regional entities) should request regional power producers to evaluate the invasive potential and ecological risks of using non-native bioenergy feedstock species, cultivars, and hybrids.

##### **▶ Prevent establishment**

- ▷ The Council encourages federal and other regional entities to prevent non-native and invasive species introductions by:

- Monitoring and managing the various pathways that could introduce additional aquatic nuisance species into the Columbia River Basin
- Developing and implementing strategies to suppress, reduce, or control non-native invasive fish species where they are identified as a limiting factor and are negatively impacting salmonids and native fish populations
- Develop strategies and public outreach tools to educate the public about regional prevention and management of invasive species
- ▷ BPA and other federal agencies should assist the Northwest states' efforts to prevent the establishment of quagga and zebra mussels.

#### ► **Monitor and control non-native species introduction and dispersal**

- ▷ Each of the four Northwest states should continue to implement the preventative strategies in their respective state aquatic nuisance species management plans and coordinate their prevention efforts closely with the other Northwest states and British Columbia
- ▷ If non-native fish species are to be used to achieve mitigation for hydropower system impacts, the agencies and tribes shall conduct an environmental risk assessment of potential negative impacts on native fish species prior to introduction. If non-native fish species are introduced, these shall be managed to maximize the use of available existing and improved habitats, consistent with state and local regulations, to provide a subsistence and sport-fishing resource without adversely affecting native fish populations.

#### ► **Removal and eradication of non-native species**

- ▷ Agencies and tribes shall apply existing and new scientific research to identify situations (species, times, sizes, and places) where increased removal of non-native fish would be most effective in increasing native fish populations.
- ▷ Agencies and tribes shall minimize non-native fish impacts to native fish species by using appropriate invasive fish-removal methods (e.g., gill net, chemical control, electrofishing, changes in fishing regulations, sport reward programs, etc.) and monitor their effectiveness. Lethal take to control non-native predators or competitors, consistent with state and federal law, is appropriate when non-lethal methods of control are not successful and the adverse impacts to salmonids and native fish species or their habitat are significant.
- ▷ The agencies and tribes shall prioritize non-native species control actions to ensure program funds are spent to address the most significant threats, including predation, competition, and hybridization.
- ▷ If quagga and zebra mussels become established in the Columbia Basin, BPA and other federal agencies, along with FERC-licensed utilities, shall support regional rapid-response efforts.

#### ► **Reduce competition**

- ▷ The federal action agencies, other federal and state agencies, tribes, and the Council should continue to review, evaluate, develop, and implement strategies to reduce competition from non-native fish species with juvenile and adult salmonids.

#### ► **Regional coordination**

- ▷ The Council will continue to coordinate regional stakeholder groups and partnerships on the issue of non-native invasive species, particularly those species that pose the greatest risk to the Columbia Basin ecosystem and the regional hydropower system. The Council will continue to assist with regional communication, coordination and public outreach efforts in the Columbia Basin, and will facilitate regional science/policy forums on non-native invasive species issues, as appropriate.
- ▷ The Council will support the collaborative work of the PSMFC 100th Meridian Initiative-Columbia Basin Team and request regular reports from that group on the following items: current regional efforts for inspection and

- decontamination; early detection efforts and rapid response protocols; research priorities relative to invasive species control, containment and prevention; and opportunities for regional collaboration and lessons learned.
- ▷ The Council will assist regional entities with legislative efforts to prevent the invasion and control the spread of non-native invasive species in the Columbia Basin.
- ▷ The Council and federal action agencies should coordinate with other federal, state, and tribal entities, and regional organizations such as the 100<sup>th</sup> Meridian Initiative-Columbia Basin Team, to track and monitor data on existing non-native invasive species distribution and population trend assessments in the Columbia Basin and encourage regional data sharing on rapid response, prevention, containment, control, eradication, enforcement, and education and outreach efforts.

### **Link to subbasin plans**

See the Council's [subbasin plans](#) for subbasin-level information pertaining to the effects of non-native species on native fish, wildlife, and habitat.